them chemically, for opposing the grave accidents as in the period of coma. The diabetic intoxication is the result of incomplete combustion of glucose, resulting in acids which are toxic for the organism and a diminished alkalinity of the blood, poisonous of itself. In diabetic coma, with immediate necessity for the introduction of alkalies into the economy, but three routes are open: 1. Intravenous saline injections of sulphate, phosphate, bicarbonate or chloride of sodium in solution; these, intended to neutralize the acids and favor the elimination, have never cured diabetic coma. 2. Subcutaneous saline injections, the hypodermoclysis of Cantani, using chloride of sodium, can dilute the toxins and favor their elimination by increasing vascular tension and urinary secretion, but as yet it has not been put to use in diabetic coma. 3. Transfusion of blood has been used by Lecorché in three cases of coma, and death without regaining of consciousness, took place. Bleeding, and that extensively, should be strongly recommended in diabetic coma. In preventing the coma the anti-diabetic medication of Mialhe, the use of the alkalies, is serviceable. The bicarbonate of soda from seventy-five grains to three times that quantity per day is the best preventive of this condition. Fatigue, mental emotions, long journeys, and violent exercise, should be avoided. Loss of fluids, as profuse sweatings, diarrhœas, injections of pilocarpine, the use of opiates, must be prevented. An exclusive meat diet "may cure the diabetes but aggravate the diabetic." Even an excessive quantity of meats and fats may precipitate a coma, as Ebstein has shown. It is also necessary to prevent abnormal fermentations in the alimentary canal. To eliminate the toxic products it is well to prescribe the purgatives, as calomel, the salines, and diuretics. Particularly in diabetic intoxication is it necessary to prevent cardiac weakness by digitalis or digitalin, or if fatty degeneration is suspected, by hypodermatic injections of caffeine. The period of diabetic coma offers but slight hope for cure; in avoiding this condition and in carrying the patient to a successful result two points are essential—to foresee and to prevent.—*Revue gén. de Clinique et de Thérapeutique*, 1893, No. 46, p. 722.

DIURETIN.

DR. E. MAIN believes that this drug owes its activity to the theobromine which it contains. The insolubility of the latter has been overcome by its forming a double salt with salicylate of soda, which is soluble in one-half of its weight in water, and is readily absorbed. In spite of much contradictory evidence, it is believed that this drug owes its diuretic properties to a direct and non-irritant action upon true renal tissue. Whether or not it has any influence upon the heart is not altogether clear. Aside from its use in œdema and as a diuretic it has two especial uses. In children it should not be administered under the age of eighteen months, as it is likely to produce a digestive disturbance and gastro-intestinal irritation. If used in scarlatinal nephritis it should not be administered until after the termination of the first stage of the disease. After operations upon the urinary tract it has been found that it prevents the onset of urinary fever, and as well shortens the time of convalescence after the operation. It does not apparently directly influence the respiration nor excite the nervous system so much as caffeine. With the exception above noted it does not produce digestive disturbances.

Beyond diuresis it is not likely to produce urinary symptoms, nor does it have a cumulative effect—nor, indeed, can a tolerance be established. The daily dose is from sixty to ninety grains, divided into fifteen-grain doses every two or three hours. Even one hundred and fifty grains have been given without danger. With children the solution can be sweetened and a small quantity of alcohol added for its preservation.—*Bulletin gén. de Thérapeutique*, 1893, 38e liv., p. 299.

OPIUM AS A PREVENTIVE OF AGUE.

SURGEON-GENERAL SIR WILLIAM MOORE has known opium consumers alone remain free from fever when most others suffered during extraordinary malarious seasons. As servants in India he preferred opium users, as they are less liable to sickness from exposure on the march or when taken into the colder climates of the hills. One of the constituents of opium, narcotine, has been proved to be an antiperiodic. Opium (especially when smoked) in small quantities excites the circulation and produces a glow throughout the whole system. In large quantities it soothes the system and blunts nervous sensibility. Both of these actions are antagonistic to chill, which is the first stage of malarious fevers, especially of ague. After working and perspiring all day under a tropical sun the Indian is very likely to become chilled. As a consequence of his taking opium after, or sometimes before, his evening meal, instead of feeling cold and shivering, he remains warm and glowing, and so escapes chill, which, if not the real and only cause of malarious fever, is certainly the cause of many repetitions of attack.—*British Medical Journal*, 1893, No. 1718, p. 1196.

MEDICINE.

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ISOLATED PERIPHERAL PALSY OF THE SUPRA-SCAPULAR NERVE.

BERNHARDT (*Berliner klin. Wochenschrift*, 1894, No. 2, p. 32) has reported the case of a sailor, twenty-eight years old, who had for four years suffered with pain at the right shoulder, aggravated by movement. Except for this and some difficulty in moving the right arm the well-nourished and well-developed man was in perfect health. On inspection it was found that the right scapula occupied a slightly lower position than the left, and that its inner vertical margin was removed a little farther from the vertebral column than that of the left. The right supra-scapular fossa was less full than the left, while the right infra-scapular fossa was distinctly excavated. The rhomboids, the levator anguli scapulæ, the trapezius, and the serratus were functionally normal and responded to electric stimulation. Despite non-involvement of the right deltoid, the patient was able to elevate the right arm with ease only to a horizontal level. By a further effort, however, he could raise the arm to a vertical position. It was evident that this was brought about only by an extra strain upon the deltoid and upper portion of the trapezius, as if in an endeavor to overcome some obstacle. The success of this effort was indicated by a visible and palpable sudden movement, after the occurrence of which the arm could be brought to the vertical position. The explanation offered for this state of affairs is that, by reason of the paralysis and atrophy of the supra-spinatus, the head of the humerus was not retained within the glenoid cavity, and that in raising the arm the head of the bone came in contact with the margin of the cavity—the interference thus encountered being overcome by the extra effort of the deltoid; the further progress of the arm was permitted as soon as the head of the humerus slipped into the glenoid cavity. External rotation of the arm was also impeded. In sewing sail there was difficulty in directing the needle outward; but no difficulty in writing had been observed. The arm could be brought well backward. The infra-spinatus muscle failed to respond to all electric stimulation. It is believed that there must have been an isolated degenerative inflammation of the right supra-scapular nerve, with consequent palsy and wasting of the supra-spinatus and infra-spinatus muscles. The affection would appear to be a rare one, for Bernhardt has observed but one other case, and he has been able to find but four additional recorded cases.

THE NATURE OF MUSCULAR RHEUMATISM.

LEUBE (*Deutsche med. Wochenschrift*, 1894, No. 1, p. 1), as a result of an experience with some two hundred cases, arrives at the conclusion that muscular rheumatism is an infectious disease, perhaps dependent upon an attenuated form of the micro-organisms upon which it is believed that acute articular rheumatism depends. Pathologic evidence in support of this hypothesis is wanting, as muscular rheumatism is not a mortal disease, but the clinical facts are in its favor. The onset of muscular rheumatism varies in different cases. In some instances the pains in the muscles are preceded by a sense of fatigue, loss of appetite, headache, vertigo, and general malaise, and sometimes there is prodromal fever. As a rule, however, severe pain sets in abruptly as the first symptom. It is not notable when the affected part is at rest, but is induced by movement. The muscles successively involved are not necessarily contiguous or related in function; on the contrary, they may be remote from the seat of primary involvement. In about two-thirds of the cases observed the course of the attack was afebrile; the remainder presented febrile manifestations of varying degree and type. In one-sixth of the cases cardiac murmurs were audible when the patients came under observation. It is, however, not implied that in all of these cases a relation existed between the rheumatism and the endocardial lesion; but in more than half the number the murmur grew fainter or disappeared entirely in the course of observation; besides, while only one-third of the whole number of cases were attended with fever, two-thirds of the cases associated with endocarditis presented febrile manifestations. In three of the cases, however, in which the signs of endocarditis were not present when the patients came under observation, such signs made their appearance in the course of the attack of muscular rheumatism. That there is some relation between articular and muscular rheumatism would appear indicated by their frequent coexistence; while the occasional occurrence of groups of cases would suggest an infectious origin.

INTRA-CRANIAL HYDATIDS.

CLARKE (*Brain*, Part lxiii. p. 424) has reported the case of a man, twenty-nine years old, who for eighteen months had been having occasional epileptiform attacks, in which consciousness was lost and the tongue was bitten. For twelve months there had been progressive loss of power upon the left side of the body. Twice within a period of six months there had been attacks of pain in the left eye, with double vision. Three weeks before coming under observation the man had been seized with violent pain in the left temple, radiating over the left side of the head to the occipital region, and which had persisted. He seemed dull and was drowsy, but could not sleep, and took no notice of what was going on about him. He could scarcely walk, and dragged the left leg. The wrinkles of the left side of the forehead were somewhat smoothed out; the right eye could be screwed up a little more tightly than the left, and on smiling the mouth was drawn to the right. The localization of sensations, both tactile and painful, was impaired upon the left side of the face, while thermic sensibility was unchanged. The tongue was protruded straight. There was some drooping of the left upper eyelid. The left pupil was larger than the right and did not react to light. There was optic neuritis of moderate intensity in both eyes. The power of localizing sensations was impaired upon the left side of the body, but sensibility was otherwise preserved. There was incontinence of urine, which was free from albumin. The left knee-jerk was exaggerated, but there was no ankle clonus. There was no evidence of disease of the thoracic or abdominal organs. In the course of a week the ptosis on the left side had become more marked, and the left external rectus was paralyzed; the optic neuritis had increased, but some power had been regained in the left arm and leg. Two weeks later the left eye was completely paralyzed and immovable and there was cycloplegia and nearly complete loss of vision; there was additionally some convulsive twitching of the left hand. After the lapse of another two weeks the right internal rectus was paralyzed and vision was lost in the nasal half of the right visual field, while even light-perception was lost in the left eye. Muscular wasting was now evident in the left arm and leg, and reactions of degeneration were present. During the month that followed a remarkable degree of improvement took place in the paralytic symptoms, although the mental condition grew steadily worse. During this time a convulsion took place, in which the muscular twitchings began in the left hand, spread to the left side of the face, and then became general. Soon after this the